

142204

# SEARCH REQUEST FORM Scientific and Technical Information Center - EIC2800

Rev. 3/15/2004 This is an experimental format -- Please give suggestions or comments to Jeff Harrison, JEP-4B68, 272-2511.

Date 1/10/05 Serial # 10/065,839 Priority Application Date 11/25/02

Your Name Milne, W. S. Examiner # \_\_\_\_\_

AU 2822 Phone 972-1838 Room \_\_\_\_\_

In what format would you like your results? Paper is the default. ☒ PAPER ☐ DISK ☐ EMAIL

If submitting more than one search, please prioritize in order of need. *Need before 1/15*

The EIC searcher normally will contact you before beginning a prior art search. If you would like to sit with a searcher for an interactive search, please notify one of the searchers.

Where have you searched so far on this case?

Circle: ☒ USPT ☐ DWPI ☐ EPO Abs ☐ JPO Abs ☐ IBM TDB

Other: \_\_\_\_\_

What relevant art have you found so far? Please attach pertinent citations or Information Disclosure Statements. \_\_\_\_\_

What types of references would you like? Please checkmark:

Primary Refs ☒ Nonpatent Literature ☐ Other \_\_\_\_\_  
 Secondary Refs ☒ Foreign Patents ☐ \_\_\_\_\_  
 Teaching Refs ☐ \_\_\_\_\_

What is the topic, such as the novelty, motivation, utility, or other specific facets defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, registry numbers, definitions, structures, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract and pertinent claims.

Claims 1, 2, 4-6, 8, 9, 11

Problem: See paragraphs 4-6  
Solution: " " " 7-11

## Staff Use Only

Searcher: HARRISON  
 Searcher Phone: 22511  
 Searcher Location: ATIC-EIC2800, JEP-4B68  
 Date Searcher Picked Up: 1-25-05  
 Date Completed: 1-26-05  
 Searcher Prep/Rev Time: 75  
 Online Time: 65

## Type of Search

Structure (S) \_\_\_\_\_  
 Bibliographic ☒ \_\_\_\_\_  
 Litigation \_\_\_\_\_  
 Fulltext \_\_\_\_\_  
 Patent Family \_\_\_\_\_  
 Other: DPCT  
Scisearch

## Vendors

NTN ☒ \_\_\_\_\_  
 Dialog ☒ \_\_\_\_\_  
 Questel/Orbit \_\_\_\_\_  
 Lexis-Nexis \_\_\_\_\_  
 WWW/Internet \_\_\_\_\_  
 Other \_\_\_\_\_

Set	Items	Description
S1	1	CR=YAMAGUCHI, 1994?
S2	570	CR=YAMAGUCHI T, 1994?
S3	2	S1:S2 AND NPN
S4	1	S1:S2 AND PNP
S5	6	S1:S2 AND VERTICAL??
S6	0	S1:S2 AND SIGE
S7	1	S1:S2 AND SI(2N)GE
S8	0	S1:S2 AND SILICON(2N)GERMANIUM
S9	6	S1:S2 AND POLYCRYST?
S10	1	S1:S2 AND MONOCRYST?
S11	6	S1:S2 AND SINGLE(1W)CRYST?
S12	2	S1:S2 AND P()N()P
S13	0	S1:S2 AND N()P()N
S14	1	S3 AND (S4 OR S12)
S15	1	S5 AND S7:S11
S16	0	S5 AND EXTRINSIC?
S17	0	S5 AND INTRINSIC?
S18	1	S5 AND EMITTER
S19	3	S4 OR S7 OR S10 OR S14:S18

? show files

File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
(c) 1998 Inst for Sci Info

File 34:SciSearch(R) Cited Ref Sci 1990-2005/Jan W3  
(c) 2005 Inst for Sci Info

?

Set	Items	Description
S1	685	NPN AND PNP
S2	3846	N()P()N AND P()N()P
S3	145	N()P()N AND PNP
S4	271	NPN AND P()N()P
S5	69	S1:S4 AND CI=SIGE
S6	12	S1:S4 AND CI=GESI
S7	73	S1:S4 AND SIGE
S8	91	S5:S7
S9	8	S8 AND VERTICAL??????

? show files

File 2:INSPEC 1969-2005/Jan W3  
(c) 2005 Institution of Electrical Engineers

FILE 'INPADOC, WPIX, JAPIO, HCAPLUS' ENTERED AT 15:30:17 ON 26 JAN 2005  
 L1 3 S US2004099895/PN  
 L2 SEL PLU=ON L1 1- IC PN : 9 TERMS  
 L3 134230 S L2  
 L4 3 S L1 AND L3

FILE 'REGISTRY' ENTERED AT 15:31:38 ON 26 JAN 2005  
 L5 1 S 12790-21-5  
 D FIDE

FILE 'HCAPLUS' ENTERED AT 16:18:38 ON 26 JAN 2005  
 L6 0 S US4719185/PN  
 L7 0 S US4997776/PN  
 L8 1 S US20030080394/PN  
 D ALL

FILE 'WPIX' ENTERED AT 16:19:29 ON 26 JAN 2005  
 L9 1 S US20030080394/PN  
 L10 1 S US4997776/PN  
 L11 1 S US4719185/PN  
 L12 3 S (L9 OR L10 OR L11)

FILE 'WPIX, HCAPLUS' ENTERED AT 16:25:48 ON 26 JAN 2005  
 L13 4 S (L9 OR L10 OR L11)  
 L14 SEL PLU=ON L13 1- PN : 7 TERMS

FILE 'DPCI' ENTERED AT 16:27:58 ON 26 JAN 2005  
 L15 27 S L14/PN.D  
 L16 SEL PLU=ON L15 1- PRN : 65 TERMS

FILE 'HCAPLUS' ENTERED AT 16:28:12 ON 26 JAN 2005  
 L17 24 S L16

FILE 'REGISTRY' ENTERED AT 16:28:34 ON 26 JAN 2005  
 L18 724 S GE SI/ELF OR GE.SI/MF  
 L19 1 S SILICON/CN  
 L20 130 S GE/MF

FILE 'HCAPLUS' ENTERED AT 16:29:22 ON 26 JAN 2005  
 L21 14764 S L18  
 L22 1271 S L19 AND L20(L)MOA/RL  
 L23 6323 S SIGE  
 L24 15805 S L21 OR L23  
 L25 7548 S L20(L)(SI OR SILICON OR POLYSI##### OR SIGE)  
 L26 474 S L22 AND L25  
 L27 16205 S L24 OR L26  
 L28 24 S L16  
 L29 13 S L28 AND L27  
 D ALL HITSTR TOT

FILE 'STNGUIDE' ENTERED AT 16:32:51 ON 26 JAN 2005

FILE 'HCAPLUS' ENTERED AT 16:33:32 ON 26 JAN 2005  
 L30 973 S ("BIPOLAR TRANSISTORS"/CT OR BIPOLAR OR  
 ("HETEROJUNCTION BIPOLAR TRANSISTORS"/CT OR "TRANSISTORS (L)  
 BIPOLAR, COMPLEMENTARY"/CT OR "TRANSISTORS (L) BIPOLAR,  
 HETEROJUNCTION"/CT)) (L)COMPLEMENTARY  
 L31 528 S ("BIPOLAR TRANSISTORS"/CT OR BIPOLAR OR  
 ("HETEROJUNCTION BIPOLAR TRANSISTORS"/CT OR "TRANSISTORS (L)  
 BIPOLAR, COMPLEMENTARY"/CT OR "TRANSISTORS (L) BIPOLAR,  
 HETEROJUNCTION"/CT)) (L)BICMOS  
 L32 5 S ("BIPOLAR TRANSISTORS"/CT OR BIPOLAR OR  
 ("HETEROJUNCTION BIPOLAR TRANSISTORS"/CT OR "TRANSISTORS (L)  
 BIPOLAR, COMPLEMENTARY"/CT OR "TRANSISTORS (L) BIPOLAR,  
 HETEROJUNCTION"/CT)) (L)BIC  
 L33 749 S COMPLEMENTARY(3A)BIPOLAR  
 L34 934 S BICMOS OR BI COMPLEMENTARY  
 L35 4866 S NPN OR N P N  
 L36 1841 S P N P  
 L37 5664 S L36 OR PNP  
 L38 1224 S L35 AND L37  
 L39 258 S ((L30 OR L31 OR L32 OR L33 OR L34) OR BIC  
 MOS OR BIPOLAR TRANSISTORS) AND L38  
 L40 22414 S L22 OR L25 OR L21 OR L23  
 L41 14 S L39 AND L40

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L42      12 S  L41 NOT L29
L43      24363 S  L18 OR L22 OR L25 OR SILICON GERMANIUM
L44      23 S  L35 AND L37 AND L43
L45      2 S  L44 AND (POLYCRYST##### OR NON MONOCRYST#
##### OR NONMONOCRYST#####)
L46      3 S  L44 AND (POLYCRYST##### OR MONOCRYST#####
## OR MONOCRYST#####)
L47      2 S  L44 AND POLYSI#####
L48      5 S  (L45 OR L46 OR L47)
D ALL HITSTR TOT
L49      6 S  L43 AND VERTICAL### AND L38
L50      246 S  (L30 OR L31 OR L32 OR L33 OR L34) AND (L35
OR L36 OR L37 OR L38)
L51      19 S  L50 AND L40
L52      2 S  L51 AND ?CRYST?(3A) (SILICON OR SIGE OR SI)
L53      2 S  L51 AND POLYSI#####
L54      46763 S  (L18 OR L19) (L) (CRYST##### OR
MONOCRYST##### OR POLYCRYST#####)
L55      5437 S  (L18 OR L19) (L) POLYSI#####
L56      50408 S  (L54 OR L55)
L57      21 S  L56 AND VERTICAL### AND (L35 OR L36 OR L37 OR L38)
L58      6 S  L57 AND (COMPLEMENTARY OR CMOS##### OR
BICMOS OR (L30 OR L31 OR L32 OR L33 OR L34))
L59      28 S  L49 OR (L52 OR L53) OR L57
L60      21 S  L59 NOT (L48 OR L42 OR L29)
L61      2 S  L60 AND EXTRINSIC#####
L62      2 S  L60 AND INTRINSIC#####
L63      15 S  L60 AND EMIT#####
L64      1 S  L60 AND SAME(3A) (LEVEL OR LAYER)
L65      3 S  (L61 OR L62) OR L64
L66      3 S  (L61 OR L62) OR L64 OR L65
D ALL HITSTR TOT
L67      1 S  (L18 OR L20) AND L60
L68      1 S  L67 NOT L66
D ALL HITSTR
L69      1 S  (SIGE OR SI GE OR SILICON GERMANIUM) AND L60
L70      0 S  L69 NOT L68
L71      200222 S  POLYCRYST##### OR POLYSI#####
L72      1712 S  L71 AND MONOCRYST#####
L73      0 S  L17 AND L72
L74      0 S  L38 AND L73
L75      4 S  (L30 OR L31 OR L32 OR L33 OR L34) AND L72
L76      4 S  (L18 OR L19 OR L20) AND L75

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FILE 'REGISTRY' ENTERED AT 17:15:00 ON 26 JAN 2005

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L77      448 S  C.GE.SI/MF OR C GE SI/ELF
L78      62 S  C/MF

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FILE 'HCAPLUS' ENTERED AT 17:16:20 ON 26 JAN 2005

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L79      930 S  L77 OR (L78(L)MOA/RL AND L18)
L80      18 S  (L30 OR L31 OR L32 OR L33 OR L34) AND L79
L81      2 S  L38 AND L79
L82      15 S  (L35 OR L36 OR L37 OR L38) AND L79
L83      1 S  L80 AND L82
L84      1 S  (L80 OR L81 OR L82 OR L83) AND INTRINSIC###
####
L85      0 S  (L80 OR L81 OR L82 OR L83) AND EXTRINSIC###
###
L86      11 S  (L80 OR L81 OR L82 OR L83) AND EMITTER
L87      20 S  (L81 OR L82 OR L83 OR L84 OR L85 OR L86)
L88      SEL PLU=ON L87 1- PRN : 14 TERMS

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FILE 'WPIX, JAPIO' ENTERED AT 17:18:26 ON 26 JAN 2005

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L89      16 S  L88
L90      3 S  L89 AND INTRINSIC#####
L91      16 S  L88
L92      3 S  L91 AND EXTRINSIC#####
L93      3 S  L90 OR L92

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26jan05 18:02:47 User259284 Session D3036.2

File 2:INSPEC 1969-2005/Jan W3  
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Set	Items	Description
S1	247	CI=(SI SS(S)GE SS(S)C SS) (S)NE=2
S2	667	CI=(SI SS(S)GE SS(S)C SS) (S)NE=3
S3	148	CI=(SI SS(S)GE SS(S)C DOP) (S)NE=3
S4	155	CI=(SI SS(S)GE SS(S)C DOP) (S)NE=2
S5	151	CI=(SI BIN(S)GE BIN(S)C DOP) (S)NE=2
S6	133	CI=(SI BIN(S)GE BIN(S)C DOP) (S)NE=3
S7	149	CI=(SI BIN(S)GE BIN(S)C SS) (S)NE=3
S8	167	CI=(SI BIN(S)GE BIN(S)C SS) (S)NE=2
S9	696	S1:S8
S10	8412	CI=SIGE
S11	8889	S9:S10
S12	690	CI=(SI EL(S)GE DOP) (S)NE=1
S13	512	CI=(SI EL(S)GE DOP) (S)NE=2
S14	9509	S9:S13
S15	247	S14 AND VERTICAL???
S16	12	S14 AND VERTICAL???(4N)TRANSISTORS
S17	92	S14 AND (PNP OR P())N()P)
S18	321	S14 AND (NPN OR N())P()N)
S19	1	16AND17AND18
S20	76	17AND18
S21	41	S14 AND MONOCRYST?
S22	257	S14 AND SINGLE()CRYST?
S23	259	S14 AND SINGLE(1W)CRYST????????????
S24	2	S14 AND MONO(1W)CRYST????????????
S25	296	S21:S24
S26	331	S16 OR S18
S27	2	S26 AND S21:S24
S28	4	S26 AND POLYCRYST?
S29	11	S26 AND POLYSI?
S30	0	S16 AND (COMPLEMENTARY OR BIC OR BICMOS)
S31	1	16AND17
S32	2	16AND18
S33	21	S19 OR S24 OR S27:S32
S34	3	S33 AND VERTICAL?
S35	13	S33 AND EMITTER??
S36	1	S33 AND INTRINSIC?
S37	4	S33 AND EXTRINSIC?
S38	11	S33 AND LAYER???
S39	2	S33 AND LEVEL???
S40	21	S19 OR S24 OR S27:S39
S41	3	S40 AND VERTICAL???
S42	12	20AND40
S43	20	S19 OR S24 OR S27:S28 OR S31 OR S32 OR S34 OR S36:S37 OR S- 39 OR S41:S42
S44	2	S43/2003-2005
S45	18	S43 NOT S44
S46	0	S43 AND (NPN(7N)PNP)
S47	9	S43 AND (N())P()N(7W)P()N()P)
S48	8	S47 NOT S44
S49	9	S43 AND (N(W)P(W)N(7W)P(W)N(W)P)
S50	12	S43 AND (P(W)N(W)P(7W)N(W)P(W)N)
S51	12	S49:S50
S52	2	S43 AND (NPN AND PNP)
S53	14	S51:S52